PROGRESS

OF

MEDICAL SCIENCE.

MEDICINE.

UNDER THE CHARGE OF
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The Action of Hemostatics in Tuberculous Hemoptysis.—M. L. GUINARD (*Medical Press and Circular*, 1908, lxxxvi, 316) divides the means employed into three groups: (1) Agents that act on the blood; (2) agents that modify the circulation; and (3) special adjuvants. With the first group comprising many local and general coagulants, the calcium salts, saline solutions, gelatin, and gelatinized serum, the author has had few, if any, good results. In the second group, the vasoconstrictors and vasodilators are taken up at length. The constrictors, such as ergot, ergotin, adrenalin, antipyrin, digitalis, and digitalin, Guinard has tried at different times, but with no promising results. As to vasodilators, amyl nitrite, nitroglycerin, and the nitrites have been used with great success in the treatment of hemoptysis, the first drug especially having been employed by Guinard for the last three years at the Bligny Sanitarium with no untoward symptoms; it acts with great promptness and efficacy. As regards special adjuvants, under which may be classed the counter-irritants, physical agents, and sedatives, ice has at times been most useful, and in Guinard's experience morphine occupies the foremost place.

In connection with this article on hemoptysis there is another on the uses of amyl nitrite by GEORGE A. GRACE-CALVERT (*Brit. Jour. Tuberculosis*, 1908, ii, 189), who reviews the many previous reports for and against the use of this drug in hemoptysis, in most of which the authors agree that it is of great value in some cases; it may be followed or accompanied by the other general measures for the relief of the trouble. Calvert concludes that the following points are in favor of amyl-nitrite. It acts instantly, producing an immediate fall in blood pressure at the bleeding points, thus giving time for clotting to take place, while the bleeding usually ceases at once. It apparently produces an intense anemia of the lung parenchyma without any reactionary hyperemia, such as follows the use of adrenalin. The capsules can easily be carried by the patient, who can then inhale the contents of one as soon as the hemoptysis begins, thus starting in the treatment at once and often preventing a worse attack. Calvert considers this drug, then, to be the most efficient of all in the treatment of such cases and by far the best one to administer first.

Sodium Chloride and the Gastric Secretion.—A. MARTINET (*Presse médicale*, 1908, liii, 418) notes that there are two actions of salt: one local on the mucous membranes of the mouth and stomach; and a general action exercised after its absorption into the body. As regards the local action, many authors say that the HCl and the peptic digestion are both diminished by the action of salt, while, on the other hand, some authors assert that these functions are increased. These differences are better understood when it is known that most of the previous work has been done on animals either carnivorous or herbivorous by nature, whereas, in man, who is omnivorous, the conditions are very different. The inhibiting or stimulating local action depends much on the habits, the anomalies of the gastric secretion, the food, and according as the salt is given alone or mixed with food. As regards the general action following prolonged feeding on a salt or salt-free diet, the views are more unanimous that the long-continued use of salt leads to a hyperchlorhydria; that a salt-free diet leads to a hypochlorhydria and diminishes the gastric secretion. Clinically, it is well known that the prolonged suppression of salt in the diet produces pain and vomiting in conditions of hyperacidity, while in other conditions in which the HCl is deficient the use of salt increases it and aids digestion greatly. Martinet's experiments on a healthy man, following out L. Meunier's technique, showed that with certain foods, as meat, the digestion was the same with or without salt, but with other foods, such as milk, eggs, and carbohydrate food stuffs, the digestion was delayed from ten to twenty minutes when no salt was given with them. He therefore concludes that in certain subjects and with certain foodstuffs, the addition of sodium chloride to the diet favors the gastric secretion.

Hydremia in Nephritis.—HALPERN (*Deut. Arch. f. klin. Med.*, 1908, xciii, 585) has made an extensive study of the hydremia of nephritis. He finds in cases of chronic parenchymatous nephritis, in which the kidneys are compensating fully, that the quantity of water, nitrogen, and chlorides remains normal in both plasma and red blood cells. Even with œdema the solids of the blood may be normal, but the plasma is diluted and is relatively increased as compared with the red blood cells. Hydremia without dilution of the plasma affects cases without œdema, and depends on the increased amount of plasma as compared with the red blood cells. Hydremia with dilution of the plasma is found particularly in œdematous patients and is due principally to the retention of water. In the course of chronic parenchymatous nephritis Halpern usually finds the sodium chloride practically normal in the plasma and in the red blood cells—the relative amounts of this salt in the corpuscles and plasma being as 1 to 2 in health, but this ratio may be altered to 1 to 5.

An Experimental Investigation into the Functions of the Thymus Gland.—ALEX. MACLENNAN (*Glasgow Med. Jour.*, 1908, lxx, 97) reviews some of the previous work done on this subject and gives the results of his operative measures on animals. He concludes that the thymus, though it may be a lymphatic gland, yet is so specialized that it must have an internal secretion of more or less importance to some of the various functions of the body. The gland is an accessory one, for its functions may be taken up by others without apparent disturbance to the individual; however, the simultaneous removal of the thymus and spleen always results in sudden death, thus suggesting that the spleen itself may carry on at times the functions of the thymus. The thyroid and the thymus are closely associated in many ways, and the results in experiments have shown that the thymus is unnecessary to the general economy when the thyroid is gone, and when the thymus is removed less thyroid suffices. The importance of this relationship is apparent in certain diseases. The sudden death in some cases of Basedow's disease following thyroidectomy, in which the thymus has subsequently been found to have been enlarged, is important on account of the relation of the enlarged thymus and the condition of status lymphaticus; the enlarged thymus after removal of the thyroid gives rise to the same conditions as produce the so-called thymus death. Therefore, in cases in which thyroidectomy is necessary an enlarged thymus should first be sought out and removed before the thyroid is extirpated.

Polycythemia, Erythrocytosis, and Erythema.—F. PARKES WEBER (*Quarterly Med. Jour.*, 1908, ii, 85) in an exhaustive critical review first divides the cases of absolute polycythemia into two divisions: (*a*) apparently primary cases of hyperplasia of the red cells, that is, cases of erythema; and (*b*) secondary or symptomatic cases of hyperplasia of the red cells, that is, cases of erythrocytosis. The first condition (*a*) is exemplified in those cases in which the persistent relation and absolute polycythemia is due to an excessive erythroblastic activity of the bone marrow, which appears to be the primary morbid picture in a condition which is characterized by a persistent increase in the viscosity and total volume of the blood, cyanosis, and enlargement of the spleen. The second condition (*b*) is one in which the erythrocytosis is an effort on the part of the organism to compensate for some difficulty in the oxygenation of the blood and tissues of the body. Thus, erythrocytosis may be looked upon as analogous to a leukocytosis, and in all cases of erythrocytosis there is as much cause for the hyperplasia of the red blood corpuscles as in cases of renal and cardiac disease there is for the heart to become hypertrophied. As conditions inducing the second group may be mentioned residence at high altitudes and chronic cardiac and pulmonary complaints. Weber then goes into the various causes of the polycythemia in cases of erythrocytosis and in those of erythema, and the character of the blood and blood-forming tissue in absolute polycythemia. The condition of erythema is next considered in detail. As regards its pathology and etiology, the various hypotheses as to its being due to a primary disease of the bone marrow, increased durability of the red blood cells, diminished oxygen capacity of the hemoglobin, or possibly to toxic and infectious causes, are discussed, the prevailing theory being that the polycythemia is due to a "primary" myelopathy; the question of impeded circulation (blood stasis) as a primary cause for the polycythemia has, however, been seriously considered. As regards treatment the various measures advocated are detailed. Venesection, splenectomy, *x*-rays, and many drugs have been used, most of which have had little or no satisfactory effect. The plentiful use of German "sour milk" or some similar preparation, on account of the effect on the flora of the large intestine, might be worth a trial in some cases, and a lacto-vegetarian diet, or one rendered as poor in iron as possible, has likewise been suggested.

Pernicious Anemia and Renal Lesions.—M. LABBE and E. JOLTRAIN (*Arch. des maladies du cœur, des vaisseaux, et du sang*, 1908, i, 366) note that relations between pernicious anemia and renal lesions have been suggested lately, and report the following case: A man, aged fifty-two years, came under treatment for a grave anemia, weakness, and generalized œdema. The patient grew steadily worse, and died in apparently uremic coma. The examination of the blood showed an intense plastic anemia with myeloid reaction and hyperleukocytosis; some nucleated reds were present and the corpuscular resistance was normal. At autopsy the main lesion present was nephritis with a kidney of the large white type. The factors of dilution of the blood, toxic hemolysis, or a defect in the corpuscular resistance, the author does not think can enter into this case. It is possible, however, that both the renal and blood lesions are the result of some infection or intoxication. At any rate, this association of the two lesions is frequent and should be noted in a condition the cause of which is so often unknown. The diagnosis between Bright's disease and pernicious anemia at times is very difficult, and a careful examination of the blood in all nephritics may help to distinguish the yellowish color of the skin of one condition from that of the other; one should bear in mind the possibility that both conditions may exist as a pathological syndrome in the same individual.

Arterial Hypertension with Hyperplasia of the Pituitary and Suprarenals.—J. PARISOT (*Arch. des maladies du cœur, des vaisseaux, et du sang*, 1908, i, 426) discusses those cases in which there is increased blood pressure and consequent cardiac hypertrophy in the absence of lesions in the kidneys, the condition depending apparently on the hyperplasia of two blood pressure raising organs, the pituitary and the suprarenals. He reports a case in a young girl, aged twenty-two years, who had been perfectly healthy up to a period six months before her death. Then symptoms of amenorrhœa and ovarian trouble began, followed gradually to the time of admission to the hospital by evidences of increasing cardiac hypertrophy, arteriosclerosis, and great hypertension. There were also cerebral disturbances due to increased intracranial pressure. At autopsy the kidneys were perfectly normal, the heart much hypertrophied, while the pituitary and suprarenals showed great hyperplasia. The ovaries showed some cystic degeneration. The known relation of degeneration and atrophic conditions of the ovaries and testicles to hyperplasia of the suprarenals, as pointed out by other authors, leads Parisot to suggest that the ovarian lesion was probably the primary cause of the increased functioning of the suprarenals and pituitary which led gradually to the cardiac and arterial changes from which the patient died.

Gastromyxorrhœa.—JULIUS FRIEDENWALD (*Boston Med. and Surg. Jour.*, 1908, lix, 265) observes that the presence of small quantities of mucus in the fasting stomach has been frequently noted. This normally should not exceed 5 cm., and when above 25 cm. Kuttner considers it indicative of the condition of gastromyxorrhœa. The diagnosis is, however, justified only when the mucus is constantly present or appears at certain intervals in patients who are unaccustomed to the use and manipulations of the stomach tube. Otherwise the action of the tube itself may account for secretion of mucus. There are two forms of this disease, the intermittent and the continuous. In the first the patient is comparatively well during the intervals between the attacks, which come on, as a rule, suddenly, with severe headache, pain, and vomiting, the latter condition being quite intractable; no food or medicine can be retained, and after a period varying from one to five days, and in one case even up to twelve days, the attack suddenly ceases. In the other type there are no characteristic symptoms and it is usually discovered in examination for other conditions of the stomach, as chronic catarrh, conditions with an absence or diminution of HCl, etc. As regards treatment, lavage seems to be of some service at the beginning of an acute attack, but not later. In the chronic form it is of some help, as is also the free administration of mineral waters. Other symptomatic measures may be used during an attack, and in the interval measures should be employed to correct as far as possible the neurotic tendency, which is marked in some cases. In association with the above abstracted article on the hypersecretion of mucus, the same affection of the intestinal tract is the subject of an article by L. Cheinisse (*Semaine médicale*, 1908, xxviii, 385), on enteromyxorrhœa of nervous origin, in which he reviews the literature of the subject and reports some cases in detail. As regards the etiology of this, as in the previous condition, the nervous element seems to play an important part, some patients having also had obstinate constipation of long standing. It is of importance to distinguish this form of the disease with its absence or scantiness of formed elements and excessive amount of thin mucus, the patient experiencing no pain, from those cases of mucous colitis in which the evacuation of mucus often formed and in casts, preceded generally by pain, are the striking symptoms. In the treatment of this disease the nervous condition of the patient must be carefully considered. The bowels must at first be thoroughly cleansed, and after a rest of a few days flushed with mild astringent enemas.

Comparative Experiments on the Presence of Complement-binding Substances in the Serum and Urine of Syphilitics.—UDO J. WILE (*Jour. Amer. Med. Assoc.*, 1908, li, 1142). The great amount of work recently done on the blood of syphilitics with the Wassermann reaction successfully has led to a finding of the same complement-binding substances in the milk of syphilitic women, and in a preliminary report Wile and a co-worker have demonstrated the same reaction in the urine of syphilitic patients. In this paper the results of the investigations of 100 cases in which the serum and urine were tested is given, so that the relative value of each in the diagnosis of syphilis could be compared. Wile concludes as follows: The urine in a large percentage of cases of syphilis contains substances which behave in the same way as the antibodies in the serum of the same cases. These substances seem to appear a little later in the urine than in the serum, and at times are present in one and not in the other, and vice versa. The diagnostic value of the reaction in the urine must for the present be viewed with caution, inasmuch as 2 per cent. of our total number of cases gave a positive reaction in the urine, while the serum in these cases was negative. In both serum and urine these bodies tend to disappear under vigorous antisyphilitic treatment.

The Serum Diagnosis of Syphilis in Mental Affections.—G. RAVIAT, M. BRETON, G. PETIT, M. GAYET, CANNAC (*Presse médicale*, 1908, lxxi, 564). The importance of syphilis as an etiological fact in so many cerebral and cord lesions has led the authors to perform the Wassermann test in 400 persons suffering with such disturbances. Of these, 165 gave positive reactions and 235 negative. Of 72 patients with general paralysis, 13 giving a history of lues, there were 93 positive and 7 negative reactions. All the cases in general paralysis and tabes reacted positively. Of the acutely demented cases the reaction was not so common. Thus, in dementia præcox, 26 per cent. were positive; in organic dementia, 30 per cent. positive. In cases of arrested mental development, such as idiots and imbeciles, the positive reactions occurred in from 30 to 34 per cent. In 234 cases with some stigmata of hereditary lues, only about 16 per cent. gave negative reactions, and in many of these there was the possibility of the glandular or ocular manifestations not being luetic. In conclusion, the authors, as a result of these positive and negative tests, wish to note the importance of lues as an etiological factor in general paralysis and tabes, and, to a lesser degree, dementia præcox, organic senile dementia, and finally in epileptics, in which latter there were the fewest positive reactions. In the imbeciles and idiots the importance of lues in their etiology is shown by the frequent positive reactions, which occurred in about one-third of the cases.

SURGERY.

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Cancer of the Mouth and Tongue.—WARREN (*Annals of Surgery*, 1908, xlviii, 481) says that the relation of the lymphatic system to the primary growth is the most important anatomical consideration in operations for